OPTICAL AIDS CLINIC

FINAL REPORT TO VOCATIONAL
REHABILITATION ADMINISTRATION
DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
WASHINGTON, D.C.
ON PROJECT NO.: RD-1344-D

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FEBRUARY 28, 1967

OPTICAL AIDS CLINIC
ROTARY LOW VISION CLINIC

MARQUETTE UNIVERSITY SCHOOL OF MEDICINE
561 NORTH 15TH STREET
MILWAUKEE, WISCONSIN

IN COOPERATION WITH
THE ROTARY CLUB OF MILWAUKEE, AND
THE CURATIVE WORKSHOP OF MILWAUKEE, INC.

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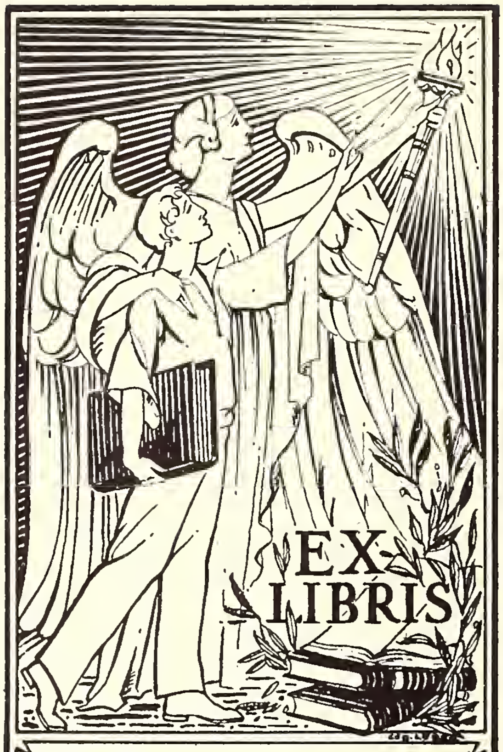

AMERICAN FOUNDATION
FOR THE BLIND INC.

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ROTARY LOW VISION CLINIC

Final Report

to

VOCATIONAL REHABILITATION ADMINISTRATION

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

WASHINGTON, D.C.

on

PROJECT NO.: RD-1344-D

Project title: OPTICAL AIDS CLINIC

December 1, 1963, through November 30, 1966

Prepared by

MARQUETTE UNIVERSITY SCHOOL OF MEDICINE

MILWAUKEE, WISCONSIN

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An expression of appreciation should be extended to all of those individuals and organizations whose combined efforts made the establishment and continuation of the Rotary Low Vision Clinic possible. It would be an impossible task to note everyone concerned.

Several ophthalmologists gave generously of their time and knowledge to assist the staff with Clinic operations. Others offered support through referrals.

The Vocational Rehabilitation Administration, the Marquette University School of Medicine, and the Rotary Club of Milwaukee offered financial and administrative assistance, professional guidance, and moral support.

We are also grateful to the State Vocational Rehabilitation Agencies, the Curative Workshop of Milwaukee, the Wisconsin Council for the Blind, and all of the other public, private and voluntary agencies for their fine cooperative efforts on behalf of the Clinic and the rehabilitation of its clients.

HIGHLIGHTS

This Selected Demonstration Project was designed to provide optical aids to those persons whose visual impairment was too severe to enabled them to be helped substantially by the prescribing of conventional lenses. Other objectives of the program involved the educating of personnel of public and private rehabilitation agencies and interested voluntary organizations concerning low vision problems and the benefits and limitations of optical aids. An additional objective was the coordinating of the services of these agencies. It was hoped that this might bring about the improvment of existing programs and the development of others. Specialized training was provided to residents in ophthalmology.

A total of 421 clients, referred by 101 different ophthalmologists throughout the State, received services during the three year period. Approximately eighty percent of the 365 who completed the full evaluation received optical aids. The remaining twenty percent included those who rejected the use of optical aids and those whose residual vision did not warrant the prescribing of aids.

Over half of those who received special lenses indicated that they use their aids routinely. More persons were interested in and obtained special lenses for the improvment of their near vision, but many clients received more than one aid. The specific needs of the individuals varied greatly.

Careful attention was given to psychological and vocational factors. Approximately one fourth of the total caseload were known to and receiving services from the State vocational rehabilitation agencies.

Statistical analysis of the relationship between clients' success with optical aids and other variables did not reveal any significant results at the five percent level of confidence . Controlled research is needed to isolate relevant factors and enhance the understanding of the dynamics involved. It has been estimated that approximately twenty percent of the staff's time was spent on education and coordination of services, and it is recommended that more attention be given to the education of professional people and the general public. There is evidence that many persons who might benefit from optical aids are not being referred to the Clinic. The lack of knowledge and prevalence of misconceptions in the area proved to be a major barrier to success.

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Section I

PURPOSE AND ORGANIZATION

A self employed 67-year-old man, an avid reader all his life, suddenly found himself unable to pursue his reading interests or meet his business demands because of sharply impaired vision. After careful evaluation in the Rotary Low Vision Clinic, demonstration of a variety of optical aids, and prescription of and adaptive training with this selected aid, he was able to return to work and resume his reading for enjoyment.

An intellectually gifted fourth grader was enabled to read advanced books of particular interest to him. An optical aid allowed another student to follow instructional material presented on the blackboard and to remain in regular classes. A recent high school graduate was given the opportunity to begin a machine shop training program which was not specially adapted to the visually impaired, due to his increased ability to read scales, micrometers, and blue prints. A man who worked part-time as a professional musician was again able to read his music. A housewife was enabled to read labels and instructions on packaged foods, recipes, and directions on medicine bottles. Another could see stove and washer dials and could sew and knit more easily. Various persons found that they could once more enjoy their favorite television programs. Others were enabled to read house numbers, street signs and bus numbers, thus improving their ability to travel independently.

Not every client seeking service from an optical aids clinic can be assured of results as dramatic as those just cited. For reasons that will be discussed later, the degree of success and satisfaction varies from person to person, and some clients cannot be helped at all. At the same time, these examples, drawn from actual case records of the Project, can be considered indicative of what can be accomplished by such a program. Many case histories with similar results could be presented.

DEVELOPMENT OF PROJECT

Some research was done in the State of Wisconsin in an attempt to determine existing needs for an optical aids clinic.

It was estimated that Wisconsin had approximately 5,000 residents who were classified as "legally blind" and an

additional 37,000 who did not fall within this category but who had significantly impaired vision.

Many of the latter were known to the Division of Vocational Rehabilitation of the State Board of Vocational and Adult Education. This Agency's professional staff was keenly aware of the need for an optical aids clinic which might reduce the handicapping affect of their clients' visual impairments.

The rehabilitation counselors of the State Vocational Rehabilitation Agency for the Blind were attempting to increase their partially sighted clients' awareness of the possible benefits of an optical aid and make the same available to these clients, when such seemed indicated. This agency quickly admitted to its limitations in this area and provided strong impetus for the development of a comprehensive optical aids program.

Ophthalmologists throughout the State indicated that they did not have sufficient time to provide this service in their private offices and that they felt that many of their patients could profit from a specialized clinic.

No comprehensive program of this nature existed in the State at this time. As a result, any individual desiring a comparable service and whose residual vision indicated that optical aids might be beneficial found it necessary to be seen in a clinic in other states. Many times the visits required for the completion of services placed heavy demands on time, financial resources, and motivation of the individual.

As the need for a comprehensive optical aids clinic in Wisconsin became more apparent, and interested professional people added impetus to the idea, formal plans began to develop for the establishment of such a facility.

Further studies were made concerning the practical implications and particulars of a specialized program. After long months of meetings and correspondence, the support and assistance of the Vocational Rehabilitation Administration of the Department of Health, Education and Welfare was obtained. The Marquette University School of Medicine, the Rotary Club of Milwaukee, and the Curative Workshop of Milwaukee also agreed to assume responsibilities for the operation of an optical aids clinic as a selected demonstration project. Dr. John B. Hitz was named Project Director.

The Project was developed and the Clinic established to serve specific purposes and acheive specific objectives.

The prime purpose of the program was the servicing of those persons who have a visual impairment that is so severe that it cannot be corrected sufficiently with conventional glasses. It was hoped that the prescribing and fitting of special optical aids, and the providing of adaptive training with the same might render their residual vision functional for the specific purposes, reducing or eliminating their "handicap". Special attention was to be given to the vocational rehabilitation of these individuals enabling them to seek remunerative employment, maintain their present position, or enhance their ability to perform their routine activities of daily living.

Secondly, the Rotary Low Vision Clinic was to educate residents in ophthalmology regarding the rehabilitation possibilities for the partially sighted and to make them aware of existing services and facilities that might assist in these rehabilitation efforts. It was also important to teach them the techniques and methodology used in examining these individuals and in prescribing lenses for them.

It was necessary to educate the professional personel of private and public rehabilitation agencies and interested voluntary organizations regarding the same.

Another objective of the Project was to foster coordination of all services for the visually impaired or blind in the area.

It was hoped that these efforts might strengthen existing programs and encourage the development of new and better programs to render service to the visually handicapped.

ESTABLISHMENT OF THE CLINIC

This optical aids clinic was established as the Rotary Low Vision Clinic, to meet the needs and objectives previously described. This selected demonstration project was to operate for a three year period under the auspicies of the Vocational Rehabilitation Administration of the Department of Health, Education and Welfare, and the Marquette University School of Medicine. The Rotary Club of Milwaukee provided the grantee share of the financial support.

The selected demonstration project officially started on December 1, 1963. The first few months of the three year project were spent in organizational activities: finding sufficient space in an appropriate setting, hiring staff, purchasing necessary equipment and supplies, accumulating and assimilating pertinent information and literature about low vision problems, and announcing the formal opening of the

Rotary Low Vision Clinic.

It was decided that this clinic should be located in Milwaukee as it is the largest municipality in the State and has the most adequate transportation facilities.

Available space was found in the Curative Workshop of Milwaukee, a well known, comprehensive rehabilitation center. Thus, ramps and elevators were accessable for the elderly and wheelchair bound patients, and the visually impaired were given the opportunity to observe and mix with other disability groups. An occupational evaluation laboratory was located in the same building, making practical evaluation of an individual's ability to function with specific optical aids possible and convenient.

An irregularly shaped room with 150 square feet of space was utilized for examining patients, demonstrating optical aids, providing adaptive training, and holding conferences. An adjoining office was used to interview clients, store optical aids, maintain and store records, and carry out other administrative duties. When a secretary was subsequently hired, she was located in a nearby room shared with a number of other clerical workers. A special intercom system was installed. Clients, waiting to be seen, shared a general waiting room with all clients of the Curative Workshop.

The Project Director and other consulting ophthalmologists served as unsalaried staff members, providing guidance in determining Clinic policies and procedures and assisting in evaluating clients with difficult pathological problems.

The Clinic ophthalmologist acted as the Clinic Director and was employed sixteen hours a week to conduct ophthalmological evaluations, and to demonstrate, fit and prescribe optical aids. In addition, he re-evaluated those clients who had been using their newly prescribed aids for an adjustment period of approximately one month. This seemed advisable to determine if the Clinic could be of further service. Another duty was the specialized training of residents in ophthalmology.

An Administrative Assistant with a masters degree and practical experience in the field of rehabilitation counseling was engaged on a full time basis. It was hoped that her own significantly impaired vision would enhance the establishment of rapport with the clients and make the evaluation more meaningful to them. She interviewed each client, made appropriate referrals to other rehabilitation agencies, demonstrated and provided adaptive training with

optical aids, and counseled clients and their families when indicated. Other duties were administrative and clerical in nature and involved the handling of all correspondence and case records, and the writing of reports. She assumed the responsibility for the public relations for the Clinic and met the educational and coordinating objectives of the Project by giving talks, participating on the Coordinating Council for the Blind and receiving and making appropriate referrals. Considerable time was spent at various private and public rehabilitation agencies and with voluntary groups in an attempt to insure the coordination of efforts for the total rehabilitation of each individual client. Initially, it was necessary for her to perform the routine secretarial duties. As the program developed, the case load increased and the services were expanded. It then became necessary to employ a half time secretary, and eventually, full time clerical help.

Volunteers were utilized for patient transportation, routine record keeping and clerical tasks and limited adaptive training.

The equipment needed in an optical aids clinic providing comprehensive services falls into three categories: 1) permanent examining equipment for conducting ophthalmological evaluations, 2) office equipment, and 3) optical aids.

Initially, large sums of money were invested in the purchasing of permanent equipment necessary for conducting thorough ophthalmological evaluations. This equipment was used to determine the nature and extent of the visual impairment and the underlying pathological problems. (See Appendix A - p. 1) Although many of the instruments were second hand, it would seem fair to say that the Clinic was as adequately equipped as the offices of many ophthalmologists in private offices.

Some additional examining equipment, not commonly used by the referring ophthalmologist, was essential for the specialized low vision evaluation. Various trial sets of microscopic and telescopic lenses, special eye and reading charts and adapted illuminators are included in this category. (See Appendix A - p.2)

Another type of examining equipment was the ready manufactured optical aids. A wide variety of aids of differing styles and strengths and special illuminators and adaptive appliances were kept on hand for demonstration purposes. They were also used for home trial, and occasionally, were sold directly to the client.

The term optical aid might be defined as any lenses, not considered to be conventional, that might be utilized to render an individual's residual vision functional for given specific purposes. Optical aids are commonly thought of as being prosthetic lenses, but other specially adapted lenses could be included in this classification. Examples might be pin hole devices and contact lenses with painted irides.

The Rotary Low Vision Clinic staff considered optical aids to be of two major types; those used for the improvement of near vision and those which increased distance vision.

The near vision aids were classified as follows: 1) handheld magnifiying lenses; 2) stand magnifiers with a set focus; 3) focusable stand magnifiers; and 4) headborne devices. The latter encompasses clip-on devices, reading glasses, and high plus bifocals.

Magnifying lenses ranged in strength from one power to thirty times magnification, and ranged in cost from seventy five cents to one hundred dollars. Approximately one hundred types of optical aids are available in the Clinic for trial.

The distance aids used were commonly accepted telescopic lenses such as binoculars and sport glasses.

Specialized adaptive equipment included various illuminators, large print playing cards, needle threaders, and reading stands.

The usual office equipment was purchased for the Clinic: desks, file cabinets, typewriters, chairs, etc. (See appendix A - p. 2) Letterhead was printed. Various forms were developed to facilitate keeping records, and to conserve time. (See Appendix B pp. 1-6)

A considerable amount of pertinent literature about low vision problems was found to be available. Manuals on operational aspects of optical aids clinics and specific information about optical aids was also obtainable. The staff spent some time collecting this helpful material, and organizing and reading the same. A form of reference library was developed for Clinic use. A suggested reading list has been completed. (See Appendix D)

The Clinic established, staffed and equiped, was ready to begin servicing clients. Formal announcements were mailed to all ophthalmologists in the State with enclosed referral forms. The two State Vocational Rehabilitation agencies were informed about the services, fees, and

appropriate referral procedures. Other public and private rehabilitation agencies and interested voluntary groups were also notified of these facts. Radio and press releases helped make the facility and its formal opening known to the general public.

Section II

CLINIC POLICIES AND PROCEDURES

SOURCE OF PATIENTS:

Most visually impaired individuals who it was thought might benefit from the program, were referred to the Clinic directly by ophthalmologists. Of the potential 241 referring ophthalmologists in the State, 101 took advantage of the service. Others were referred by the Division of Vocational Rehabilitation and the State Services to the Blind with an accompanying ophthalmological report, recommending a specialized low vision evaluation. This report was to be dated no earlier than one year prior to the date of the referral.

Upon occasion, interested persons called for an appointment, attempting to make a self-referral. In these instances, the party was asked to contact his private ophthalmologist to ask him if they might profit from the evaluation. If so, he was asked to submit the regular referral form, indicating the nature and extent of eye disease.

Receipt of referrals was acknowledged by mail, and the client was contacted directly for the appointment.

The comprehensive, specialized low vision evaluation was time consuming and complex in nature and could be broken down into the following components: 1) the initial interview; 2) ophthalmological examination; 3) demonstration of and adaptive training with optical aids; 4) counseling; 5) prescription of aids; 6) re-evaluation; and 7) follow-up studies. Every client completed at least the first two phases of the program. The length of the evaluation and the specific order of procedures used was altered per individual. Some clients were seen as many as twelve times over a period of months; and others were re-evaluated regularly. Six hours was the average time spent to complete the full evaluation.

Initial Interview: Each client was interviewed by the Administrative Assistant during the initial visit. The purposes for the lengthy interview were many in number. The objectives were the gathering and giving of specific informa-

tion.

An attempt was made to conduct this interview in a conversational manner, hopefully making the individual feel more at ease and dispelling some of his fears and apprehensions. The forms were not completed during the interview for this reason.

Some specific factual information was needed for maintaining complete case records and for compiling meaningful statistics. This specific information and a complete medical history proved to be of great assistance to the Clinic ophthalmologist in conducting the evaluation. Case data forms were adapted from the Low Vision Clinic of the Cleveland Society for the Blind. (See Appendix B pp. 7 - 11)

Although these specific facts were essential and helpful, another type of information was of greater significance. The importance of the attitude of the client regarding his visual impairment and imposed limitations and his ability to function practically with his impairments must not be minimized. Admittedly, facts about these aspects of the problem are often difficult to determine and assess. If the Administrative Assistant felt that the client was not offering valid or truthful information about his ability to function adequately, or his feelings about his problems, she would use her strong magnifying lens in reading glasses to read some material without mentioning her own impairment. Frequently, clients become aware of the existence of her eye problem and her ability to function with the same. This helped the establishment of rapport, and the interviewee frequently began to volunteer information about his "real" attitudes and problems. Rating scales were developed to help her assign a numerical value to that individual's level of motivation and sociability. (See Appendix B pp. 12- 13) An Attitude Toward Disabled Persons Scale was administered to the clients at the end of the interview in an effort to obtain a more objective measurement of the relevant Psychological implications. This technique was used with the first one hundred patients and was readministered at the time of the first follow-up study. (See Appendix B - p. 14)

Specific attention was paid to the individual's needs and expressed wishes of each client, as this was helpful in determining the types of aids that might be prescribed. For example, a headborne aid, leaving both hands free, and adaptive equipment would be most desirable for an older woman interested only in sewing, while a stand magnifier with a set focus would appear indicated for a person with tremors of the hands. The other major objective of the interview was the

dissemination of specific information.

It was discovered that new referrals had little if any concept of the purpose and services of the Clinic. Thus, time was taken to explain procedures and goals in detail. Attempts were made to dispel their fears concerning further loss of vision from using their eyes for near work and watching television. The necessary limitations of optical aids were also discussed. Great emphasis was placed on the importance of motivation of the individual and his willingness to put forth the time and effort to obtain maximum benefit from special lenses and from the program.

At that time, referrals to other agencies for additional help was approached. The Administrative Assistant contacted the rehabilitation counselors directly regarding referred clients, prepared the necessary paper work, and continued to work with these other facilities throughout the evaluation.

Fees were discussed, determined and adjusted according to the individuals ability to pay. Upon occasion, financial help was sought from other agencies.

Clients having vocational potential and meeting the eligibility requirements of either of the State Vocational Rehabilitation agencies were referred to those agencies for the payment of diagnostic fees. When financial need existed. those agencies also assisted in the purchasing of the prescribed aids.

A sliding fee schedule was developed and necessarily revised twice during the three year project to acheive a realistic fee in relation to the cost of Clinic operations. (See Appendix B pp. 15 - 18) This schedule was not adhered to rigidly as other variables had to be considered. Noteworthy monthly medical expenses and outstanding bills made this necessary. The determined amount entitled the individual to one full years' services regardless of the number of visits. This was done to encourage him to return as often as deemed advisable by the staff before prescribing final lenses, without worrying about mounting costs. It was also done to encourage him to return at anytime during that year if he noted a change in vision or if he felt the Clinic could be of further service to him. If, however, the Clinic could not be of substantial help to that client, fee adjustments were made in accordance with the time and effort expended to date.

A brief of the patient information obtained during this interview was prepared for the Clinic Director before he

saw the client for the ophthalmological examination.

This phase of the evaluation was completed by the physician to determine the extent and nature of the visual limitations. Even though the diagnosis, visual acuity, and other information was on the referral form and at his disposal, it seemed advisable to do a thorough ophthalmological examination. The observations made during the examination helped determine the type of aid that should be considered. It also provided a comparative base for future evaluations when the client returned, complaining of further loss of vision.

The visual acuity with and without correction was carefully measured, usually at the distance of ten feet. A projector was specially adapted for this type of testing. Each client was encouraged to take his time in reading the charts, to try fixating eccentrically, and to guess if he was not sure. Distance acuity was measured in careful steps, making acuity measurements more meaningful than terms like finger-counting or legal blindness. Near vision was also checked with and without correction. Conventional measuring techniques were used to insure adequate communication and understanding of reports.

External examination and observations of extraocular movements and muscle balance were done routinely . Slit lamp and fundus examinations were also performed on every client. Intraocular tensions were also taken. Manifest and cycloplegic refractions were usually done although dilation of the pupils was sometimes contra-indicated. An estimate of desired lense type and strength was made at this time. Approximately one hour was spent on this portion of the evaluation.

If medical and psychological factors indicated that additional services could be rendered at that time, optical aids were demonstrated. Although this was not the common procedure, transportation problems, mental alertness and a high degree of motivation prompted this additional service during the initial visit.

In most instances the demonstration of optical aids was done at a later date. The style and strength of the aids used were largely determined by the specific needs of the individual client and the purposes for which this aid would be used. The general goal was to enable the subject to read newsprint with fair ease. The Jaeger scale was used as the frame of reference. It seemed advisable to improve the near vision to such an extent that J 1 could be discerned with slight difficulty.

A rule of thumb used to determine the approximate lens strength required for reading has been commonly accepted by those involved in fitting subnormal vision aids. The fraction used to indicate distance visual acuity should be inverted and the numerator divided by the denominator. The numerical answer should be considered a working base in dioptric power. A number of variables such as accommodative ability or nearsightedness automatically alter the lens strength tried.

The approximate required magnification determined, trial spherical and aspherical lenses were placed in trial frames. The client's ability to read with the same was measured on the Jaeger scale and strength was added or decreased to obtain the desired results. Ready manufactured optical aids of comparable strength were then demonstrated to the individual. For reasons not easily explained, clients were observed to perform more adequately with some aids than with others, A specific aid was then selected for home trial, giving the person an opportunity to practice with the special lens in the practical setting. The effect of other variables could then be evaluated in accordance with the individual's ability to function adequately. This two week trial period also afforded practice time and initial adjustment to the necessary limitations of optical aid. Another appointment was scheduled at that time. Specific instructions were given regarding practice procedures as reading speed and tolerence was noted to increase substantially with concentrated effort. Occasionally written directions were provided . (See Appendix B - pp. 19 - 21)

Similar instructions were available for the use of telescopic lenses.

It seemed confusing to the clients to try improving both their distance and near vision with optical aids during the same visit. Thus, telescopic lenses were usually tried at a later date. The power of these lenses was also determined by the specific needs of the individual and his experiences with loaner aids. For example, visual acuity did not have to be increased to 20/20 for seeing blackboards, traffic lights or television. Practical evaluation was even more essential in these situations. These distance aids ranged in strength from two and one half to twelve power and were available in various styles.

The purpose of the next visit was to evaluate the clients experience with and attitude toward the special lenses. Other types of aids might be indicated on the basis of his experiences or specialized adaptive training might be recom-

mended to assist the patient in adapting to the lens. Individual, or family counseling was sometimes indicated.

Clients were seen repeatedly and until such a time that they seemed convinced of the benefits of the magnifying lenses. The appropriate style of lens was then determined and the final prescription made.

Some of the ready manufactured aids were ordered directly from optical companies for the clients, while others had to be obtained from local dispensers.

Special reading glasses and high plus bifocals were made by a skilled optician in Milwaukee who was found to have exceptional ability in handling difficult and unusual prescriptions. In addition, he was observed to appreciate some of the psychological factors in fitting special lenses, paying special attention to individual desires and making the glasses as cosmetically acceptable as possible.

When conventional lenses were prescribed, the people were asked to go to an optician of their own choosing.

The client was instructed to call for another appointment after receiving and using his new aid or aids for approximately one month. At that time his ability to function with the new devices was measured and his attitudes re-evaluated. Further adaptive training or counseling might be recommended. If not, a final report was written and mailed to the referring ophthalmologist and any agency involved in the rehabilitation efforts in behalf of the client. (See Appendix B- pp. 22-24)

Considerable time was spent educating the client in the proper use of these aids. This included instructions concerning illumination, appropriate working distances and proper fixation.

Follow-up questionaires were sent to clients two months after this evaluation and again after one, two, and three years. (See Appendix B - p. 26) This form helped the staff assess the success and satisfaction of the individual.

Every client was encouraged to return to the Clinic at anytime in the future if he felt we could be of any further service to him.

Section III

DESCRIPTION OF CASELOAD

A total of 421 clients received services from the Rotary

Low Vision Clinic over the three year period of this Project. An additional twenty-four were referred but received no services because of their persistent failure to keep scheduled appointments. As forty-seven of these 421 are relatively recent, they have not yet completed their evaluation. Statistics concerning them will be included in the description of the caseload presented in this section, but not in the portion of the report discussing results of services rendered.

AGE AND SEX DISTRIBUTION:

The ages ranged from 4 to 92 years, but since it is well established that the incidence of visual impairment is increasingly higher in the aging population, it is not surprising to note that clients were heavily concentrated in the 55 year and older catagories.

In grouping the clients according to age at the time of admittance to the program, it seemed advisable to arbitrarily adopt a system of unequal class intervals to obtain more meaningful information.

The following eight catagories were developed: 1.) birth to 13th birthday, 2.) 13th to 19th birthday, 3.) 19th to 25th birthday, 4.) 25th to 40th birthday, 5.) 40th to 55th birthday, 6.) 55th to 65th birthday, 7.) 65th to 75th birthday, 8.) 75 years and older.

The period of adolescence (13th to 19th birthday) and the classification of early adulthood (19th to 25th birthday) cover a period of only six years each. These relatively small intervals were devised as it was felt that the numerous changes taking place during these twelve years of a person's life might have significant influence on the results acheived with optical aids.

Assuming that life is likely to be relatively stable between the ages of 25 and 55, class intervals of fifteen years were used. The increasing incidence of visual impairment in later life seemed to warrant acceptance of somewhat smaller class intervals of ten years beyond the age of 55. No further breakdown according to age was attempted for clients over the age of 75.

The following table shows the number of clients who fell in each of the eight age groups.

Table I

Age Distribution of Total Caseload

Age Catagories	Number
Birth to 13th birthday	27
13th to 19th birthday	31
19th to 25th birthday	24
25th to 40th birthday	43
40th to 55th birthday	36
55th to 65th birthday	50
65th to 75th birthday	102
Beyond 75th birthday	108
	421

Table II

Sex Distribution of Total Caseload: The sex distribution of the Clinic caseload was as follows:

Sex	Number
Male	215
Female	206
	421

CAUSES OF VISUAL IMPAIRMENT:

An attempt was made to clarify the various causes of the visual impairment of the client. It should be noted that the diagnosis frequently revealed more than one contributing causal condition.

Deciding which of the underlying pathological conditions contributed most to the actual impairment of vision was not always easy. For example, both optic atrophy and corneal dystrophy might be present in an eye and determining the degree to which each has contributed to the loss of acuity was often difficult. Furthermore, the existence of one condition might be a deterrant to the determination of the presence or extent of another, as mature cataracts, preventing adequate visualization of the fundus and the determination of the extent of macular degeneration.

A distinction has been made between primary and secondary causes of visual loss. Severe diabetic retinopathy frequently leads to retinal detachment, the latter being secondary to the basic cause, diabetes.

With these points in mind, the following table of prevalance of visual impairment of the total caseload in the terms of causative pathology was prepared. In each case, the cause listed is that contributing most directly and substantially to the visual handicap.

Table III

Causes of Visual Impairment of Total Caseload

Diagnosis	Number
Senile Macular Degeneration	141
Juvenile Macular Degeneration	19
High Myopia	56
Uveitis and Chorioretinitis	24
Glaucoma	23
Diabetic Retinopathy	21
Retinal Detachments	15
Retinitis Pigmentosa	16
Congenital cataracts	12
Hypertensive Artereosclerotic Retinopathy	11
Primary Optic Atrophy	13
Corneal Dystrophy	9
Amblyopia	7
Senile Cataracts	3
Aphakia	4
Chorioderemia	4

Table III - (con't)

Diagnosis	Number
Albinism	5
Chorioretinal Degeneration, (unclassified)	8
Branch occlusion of central retinal vein	2
Keratoconus	3
Angoid Streak	2
Others	23

Age of Onset and Duration of Visual Impairment of Total Caseload:

Different age groupings were used to describe the caseload in relation to the age of onset of visual impairments, and duration of blindness.

It has frequently been suggested that children who lose vision before the age of six are not likely to retain "visual memory". This term applies to the memory of sight with normal visual functions, the loss of which is feared will affect their later use of residual vision. In view of this possibility, a separate class interval was designed to include those clients who did in fact lose vision prior to the age of six. The previously noted increasing incidence of significant visual problems in later years prompted us to keep the ten year intervals, beginning at age 55.

The following table indicates the number of clients who fell into each group according to their age at the onset of their visual impairment.

Table IV

Age of Onset of Visual Impairment of Total Caseload

Age Group	Number
Birth to 6th birthday	91
6th to 13th birthday	18

Table IV (con't)

Age Group	Number
13th to 19th birthday	9
19th to 25th birthday	12
25th to 40th birthday	26
40th to 55th birthday	35
55th to 65th birthday	55
65th to 75th birthday	93
Over 75th birthday	82
	421

It seemed advisable to use smaller class intervals of time for those whose impairment was more recent than classifying clients according to the duration of the visual impairment. This decision was based on the premise that a person suffering a loss of vision would have a greater adjustment problem initially, and that his general adjustment would be more stable with the passing of time. With this assumption in mind and all other variables held constant, we might hypothesize that a client would be more likely to have success with the use of an optical aid as the duration of visual impairment increased. The relationship between these two factors will be discussed later. (See Section IV and Appendix C - p.5)

The table below classifies clients of the optical aids clinic according to the duration of visual impairment:

Table V

Duration of Visual Impairment of Total Caseload

Duration of Years	Number
Less than one year	74
One, but less than 3 years	106
Three, but less than 5 years	48
Five, but less than 10 years	71

Table V (con't)

Duration of Years	Number
Ten, but less than 20 years	66
Twenty, but less than 30 years	21
Thirty or more years	35
	421

EDUCATION AND VOCATIONAL STATUS:

The table showing the educational level attained by clients does not fully reflect the varying degrees of academic training actually found among the 421 individuals. Very few clients related that they had received "no formal education", while, at the other extreme, there were clients with advanced university degrees, including degrees in medicine, law, and accounting. The possibility of a relationship between educational levels and success with an optical aid will be mentioned later.

In order for the table not to be misleading, it must be noted that students were classified according to their present standing in school, their final level of achievement in formal education not yet determined.

The following table shows levels of formal education formerly achieved or currently achieved by clients.

Table VI

Level of Education of Total Caseload

Formal Education	Number
Less than completion of Elementary	107
Completion of Elementary	76
Attendance at high school; Did not graduate	65
High school graduate	67
Attendance at college; Did not graduate	61
College graduate	45

Table VIII shows the employment status of clients. The large number not currently employed or interested in obtaining employment is partly accounted for by the heavy concentration of clients in the older age group. Such persons had already retired, perhaps earlier than they would have done had they not suffered visual impairments, and they were no longer seeking employment. Many of the remaining number of unemployed clients were known to either of the State vocational rehabilitation agencies.

The following table shows the status of clients with respect to employment at the time of the initial interview in the Clinic.

Table VII

Employment Status of Total Caseload

Present Status	Number
Not currently seeking outside employment (including persons who have retired, housewives, and students)	303
Currently unemployed, but seeking employment	34
Part-time employment	21
Full-time employment, but dissatisfied with present employment	4
Full-time employment, and apparently satisfied with job	59

No attempt was made to classify clients according to occupation. A review of case records, however, showed that clients had been, or currently were, engaged in a wide variety of occupations and on various levels of skill. Clients with professional training included a doctor of medicine, a lawyer, an accountant, a social work supervisor, and several teachers. Some of the other occupations were machine operators, secretaries, truck drivers, janitors, farmers, salesmen, musicians, type setters and unskilled assembly workers. Housewives were included in the first category even though they could be considered employed.

The presence of visual impairment obviously places some limitations on occupational choice. The wide variety of

occupations was indicative of the fact that many of these persons had normal vision when they selected their vocations.

Section IV

MEETING PROJECT OBJECTIVES

Having considered the purposes for the development of the demonstration project, the procedures and policies adapted by the optical aids clinic, and a description of the caseload, we now turn to a discussion of the results achieved in the effort to meet the specific purposes and objectives.

CLIENT'S SUCCESS WITH OPTICAL AIDS:

Before describing the criteria used to determine client's success with optical aids, it is relevent to discuss the various purposes for which clients wished to use these aids. One individual's only concern was the improvement of his general distance vision. Another's might have been improving her near vision for sewing and knitting.

Many clients have several specific needs. An individual primarily interested in being enabled to read newsprint, might also have had hopes of finding help for independent travel, viewing television, and stamp collecting. Frequently clients found multiple uses for a given aid, and many who initially had only one specific purpose in mind, ended up with several devices.

Thus, a woman using a microscopic lens for reading her mail, might also take a telescopic lens to help her read house and bus numbers, and desire a convenient folding hand magnifier for seeing labels and prices in the grocery store.

This multiplicity of purposes, leading to the prescribing of more than one aid to meet the needs of the individual, complicates the assessment of the success factor.

The following listing shows only principle purposes for which all clients wished to obtain optical aids.

Table VIII

Principle Purposes for Obtaining Aids

Purposes	Number

Table VIII (con't)

Purposes	Number
Reading related to employment (current or planned)	32
Other duties related to employment or vocational training	18
Activities of daily living (housework, etc.)	35
School (textbooks, blackboards, etc.)	39
Mobility and independent travel	19
Reading for personal interest	261
Hobbies	6
Not specified	11
	421

As shown in Appendix C, Table XIII, no relationship was established between the purposes for which aids were obtained and success in their use. The data for this statistical analysis was obtained from initial interviews with 152 clients and follow-up questionaires returned by them.

Both functional and psychological factors were considered in ascertaining client success with an aid. Criteria used to measure the functional success included the client's ability to use the aid, as demonstrated at the time of the re-evaluation by the Clinic ophthalmologist, his progress during adaptive training, and the final results obtained. A helpful instrument was the completed follow-up form, indicating whether or not and to what extent the aid was being used. This information was not subject to direct verification by the Clinic staff.

The importance of the psychological implications were measured on the basis of two factors: 1.) Did the Clinic and its services meet the client's prior expectations of the services? and, 2.) was the client satisfied with the

benefits obtained from the program?

SUMMARY OF RESULTS

As previously stated, 47 of the total 421 persons referred to the Clinic had not completed the evaluation prior to the time data was gathered for the preparation of this report. Thus, results achieved in meeting clients needs are reported for only 374 clients. In addition, several people died before completing the program, while others moved and could not be contacted. Some failed to return for re-evaluations after receiving an optical aid, preventing a final determination of benefits received.

The general results achieved with the remaining 365 clients are shown below:

Table IX

General Results Achieved

Results	Number of Clients	Percentage
Helped by aids	295	80.8%
Could not be helped	46	12.6%
Could be helped but rejected the use of aids	24	6.6%
	365	100 %

Table IX indicates that a significant number of these referrals who completed the full low vision evaluation were helped substantially by the program. The 46 clients that could not be helped with optical aids included those whose vision was too poor to render optical aids beneficial and those whose vision was too good to warrant the prescribing of special lenses. The remaining six and one half percent of this population could have been enabled to read newsprint or benefit from other types of optical aids but who were not motivated enough to accept or adjust to the necessary limitations of optical aids.

A special study was completed on the first one hundred cases to determine the type of optical aids received. It was noted that a significantly higher proportion of clients were interested in the improvement of their near vision. Interestingly enough, eighty percent of these persons did,

in fact, receive optical aids for that purpose, while only twenty-five percent of the population were helped substantially with aids for the improvement of distance vision. It should be noted, however, that approximately half of the total number could have benefitted from distance aids but refused to accept the same.

A table showing these statistics follows:

Table X

Relationship Between Success and Type of Help Received

Success	Near	Distance
Helped	80	25
Not helped	5	24
Not desired	15	51
	100	100

Psychological results were also studied. The same one hundred clients rated their degree of satisfaction with the services rendered, and the results and findings were as shown in Table XI .

Table XI

Degree of Client Satisfaction

Degree	Percentage
Satisfied	63%
Not satisfied	16%
Indifferent	21%

Recent follow-up studies on 152 clients who had received optical aids revealed these results:

Table XII

Degree of Success with Optical Aids

Success	Number of Clients	Percentage

Table XII (con't)

Success	Number of Clients	Percentage
Aid not used	19	12.5%
Limited use	51	33.5%
Routine use	82	53.9%
	152	99.9%

As mentioned earlier, many clients had more than one purpose in mind when seeking service, and ultimately obtained more than one aid. The following table shows both the principle aid provided to each client and the total number of each type of aid given:

Table XIII

Types of Aids Given

Types of Aids	Principle Aid	Total Provided
Conventional lenses	5	5
Hand magnifiers	34	67
Stand magnifiers	25	26
Reading glasses of two and one half power or less	55	56
Reading glasses of two and one half power or more	70	70
Bifocals	60	60
Telescopic Lenses	37	76
Other lenses	9	13
Adaptive equipment	3	32

DISCUSSION OF SALIENT POINTS

Appendix C presents a series of tables showing the results obtained from a statistical analysis of material drawn from records of the optical aids clinic. Each table is designed to note the relationship found between success with the use of an optical aid and a number of other variables. The information was obtained from questionaires completed by 152 clients. The most recent report from each client was used for this purpose.

Details of the statistical procedures used are given in the Introduction to Appendix C. Discussion of the relationship between success and several psychological characteristics is reserved for the next section, and only a brief comment on the other findings need be offered here.

Perhaps the most salient feature of Appendix C is the lack of a significant relationship between success and any of the other variables considered. Relationships are positive but surprisingly low.

In summary, no significant relationship was found between success with an optical aid provided and any of the following factors: sex; age; level of education; employment status; age of onset of visual impairment; duration of visual impairment; cause of visual impairment; type of aid provided; receipt of services from the Division of Vocational Rehabilitation, or from the Division of Services to the Blind; and the principle purpose for which an aid was sought. No significant relationships were found between success and the three psychological characteristics considered.

Where rank order correlation coefficients seemed appropriate, no value as high as .10 was obtained. Most values were positive, but negligible. The chi-square was a more appropriate form of measurement in other instances. The obtained value consistently fell short of the critical value needed for significance at the five percent level of confidence.

Numerous categories within certain variables, as in the cause of visual impairment and the type of aid given, often caused samples to be notably small. This limited the effectiveness of the statistical analysis.

Satisfying the Needs of the Referring Ophthalmologists and Agencies

Although the needs of the clients served were of primary

concern, the needs of the referring ophthalmologists and interested agencies had to be considered.

Summary reports of findings and recommendations were mailed to the ophthalmologists upon completion of services, and interim reports were mailed when indicated. (See sample report - Appendix B - pp. 22-24) Feed back from some of the referring men indicated that they were pleased with this type of report, including psychological and vocational information as well as ophthalmological findings and recommendations.

A survey of their attitudes toward the Clinic and its services was made in September of 1965 (See Appendix B - p. 27). This was hoped to provide constructive criticism for ways and means of improving the program. Instead, over 89% of the reports were favorable in nature, and several complimentary letters accompanied the returned surveys.

Forty-six of the potential seventy-eight referring ophthalmologists returned the form. Forty-one were pleased or satisfied with the services, and rated the services as necessary or helpful. Only one related that he would make no further referrals.

An attempt was made to determine the reasons for the limited number of negative responses. In each instance, that ophthalmologist had evaluated the program on the basis of only one referral. These specific cases happened to be clients who were not motivated to accept the use of optical aids or who had refused to complete the full program of services.

No comparable survey was made of the staff menbers of the State vocational rehabilitation agencies. However, frequent, personal or telephone contacts with these people would lead us to believe that they were generally well pleased with the program and its services. Several written testimonials were also received from several rehabilitation counselors, employed by these agencies.

Summary reports of findings and recommendations were also made available to these counselors. In addition, the Administrative Assistant kept in close contact with these people concerning clients of mutual concern, by phone, mail, and personal visits to the agency concerned.

Although our statisitcs demonstrate the fact that a coordinated effort could not vocationally rehabilitate all of these individuals, a significant number were rehabilitated as defined by VRA, and the remaining number received sub-

stantial services that would otherwise not have been available.

When other public or private rehabilitation agencies or interested voluntary groups were rendering services to our clients, similar procedures were followed. The Administrative Assistant actively participated on the Coordinating Council for the Visually Handicapped, helping to develop a directory of services for the visually impaired in the Greater Milwaukee Area. She was also active in the Wisconsin Rehabilitation Association and the counseling division of that organization.

Numerous talks and demonstrations were given to professional people and interested persons.

A number of residents in ophthalmology came to the Clinic to observe the evaluation. The Project staff, believing that experience in the Clinic would offer the residents valuable training, had hoped for a more structural program to meet the objectives.

Section V

SOME PSYCHOLOGICAL FACTORS AND SUCCESS IN USING AN OPTICAL AID

Some clients rejected the use of optical aids, eventhough it had been demonstrated that they could profit substantially from using special lenses. Another twelve and one half percent of the clients indicated that they did not use their prescribed aids.

As failure to accpet or use a prescribed aid had not proven to be significantly related to other measured variables, it seemed reasonable to suspect that psychological factors had contributed to these negative results.

A research psychologist assisted in developing measuring instruments to ascertain the extent to which success could be determined by each of the three psychological characteristics.

PRIOR MOTIVATION

The administrative assistant assigned a score, designating the level of prior motivation, to each client upon completion of the initial interview. A number of factors were considered in determining this score. (See Appendix B - p. 12) Scores ranged from one to five, five being the strongest level of motivation.

Table V of Appendix C shows that no significant relationship exists between the motivation ratings and success with an optical aid. The findings are positive but negligible. A rank order correlation coefficient of .05 was used.

SOCIABILITY

This characteristic was determined and scored in a similar manner. (See Appendix B pp. 12-13) The higher numbers denoted more sociability.

The findings shown on table VI of Appendix C negate the existance of a significant relationship between success and sociability. Once again the relationship was positive but negligible. An interesting observation was that all clients who received a sociability rating of five indicated that they used their optical aids routinely. However, only four clients fell in this category, leaving the sample too small to be considered indicative.

ATTITUDES TOWARD DISABLED PERSONS

An effort was made to determine "attitude toward disabled persons" as an indicator of other relevant attitudes. The scale developed for this purpose by Disability, Inc. was used. The form was administered to 115 clients. The ATDP Scale, (See Appendix B - p. 14) presents twenty statements regarding disabled persons. The subject is asked to rate his agreement or disagreement with each statement on a continuum of +3 to -3. The most favorable attitude would be achieved by answering questions 2, 5, 6, 11 and 12 with a plus three and all other questions with a minus three. The scale is scored as follows: 1.) reverse the sign of the responses to items 2, 5, 6, 11, and 12; 2.) sum all responses; 3.) reverse the sign of the sum obtained; 4.) and add 60. This procedure avoids the minus sign in the final score. More favorable attitudes have higher scores, ranging from zero to 120.

This scale was used in the optical aids clinic, as it was assumed that a measure of attitude toward disabled persons might well reflect the client's attitude toward his own disability.

As shown in Appendix C, table VII, the relationship between success and scores on the ATDP scale is positive but negligible, with a rank order correlation coefficient of .08. The lower mean score in the ATDP scale, obtained by those individuals who reported no use of the optical aid, suggested possible differentiation. AT Test revealed these

differences to be insignificant at the five percent level. The group reporting limited use of aids had a higher mean score on this scale than did those reporting routine use. This difference was also found insignificant at the .05 level.

DISCUSSION OF FINDINGS

No significant relationship has been established between success and prior motivation, sociability, and attitudes toward disabled persons. These findings were obtained through follow-up studies and relate only to those clients who had been given an optical aid. Clients who rejected an aid were not included.

It would be unwise to conclude that psychological factors play no significant part in determining success with an optical aid from the foregoing findings. The characteristics influential in determining success may be other than those considered in this study. Another consideration is that the methods used to ascertain characteristics might not be objective enough or sufficiently effective for this purpose.

Motivation and sociability were rated prior to the demonstration of optical aids. We might hypothesize that many clients had unrealistic notions about what to expect from an optical aid, and lacked of knowledge concerning the necessary limitations of special lenses. The fact that these limitations are explained to the client before the demonstration of aids may not be sufficient to offset subsequent disappointments.

The study on which our findings are based had one notable limitation. Returned follow-up questionaires were used. The objectivity and accuracy of such instruments are always open to criticism. For example, clients who were somewhat dissatisfied with results might under-rate their use of the optical aid. It seems equally possible that other clients might have rated success to present themselves in a favorable light or merely to please the Clinic staff. The definition of relative success was another difficulty. What one client may have regarded as"limited use", another may have termed "routine use". An attempt was made to offset this problem by specifically asking the clients how often the aid was used.

It might be interesting to speculate what the findings would have shown if all clients had responded to the follow-up questionaire.

Whatever the factors are that contribute to success

with the use of optical aids, the fact remains that some clients, who could have benefited from special lenses, rejected them, and others reported not using their aids.

Section VI

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The results, previously cited, show the necessity of and purpose for a comprehensive optical aids Clinic in Wisconsin.

This facility has provided a consultant service to ophthalmologists, who themselves have not had the time to provide a comparable service in their own offices. Approximately 42 percent of the practicing ophthalmologists in the State have availed themselves of the services.

It assists the State vocational rehabilitation agencies by making maximal use of their clients' potential vision for specific vocational objectives. 103 of the 421 individuals serviced were clients of mutual concern, and seventy-two of these persons were enabled to maintain their positions, seek remunerative employment, or more adequately perform their activities of daily living. An additional 103 clients, not receiving services fron either State vocational rehabilitation programs, were vocationally rehabilitated. Although the benefits derived from the Clinic by the remaining were not measurable, it was suspected that they are substantial.

The Clinic staff coordinated services of existing rehabilitation programs for the visually impaired and attempted to educate professional people and lay people regarding the benefits of optical aids.

The program serviced persons of all ages and educational levels. The youngest client was four years old, and the oldest, 92. People with no formal education were evaluated along with college graduates and doctors of medicine. Although advanced academic training was not proven to be necessarily related to the success derived from optical aids, literacy was vital. More referees were assisted for reading purposes than for the improvement of general distance vision.

A variety of eye pathology was seen in the Clinic. It became evident that those with a loss of central vision could be helped more substantially than those having a loss of peripheral field.

The psychological factors involved merit some attention but have no significance. The individuals' relationship to success at the .05 level of confidence, acceptance of his limitations, and his motivation to accept the use of optical aids and adjust to their necessary limitations were measured and found to have some positive bearing on the final result.

RECOMMENDATIONS

Further education about low vision, related problems, and the benefits of optical aids is strongly recommended.

The varying types of referrals received from different ophthalmologists indicates that additional information should be disseminated to them. Apparently many ophthalmologists are not aware of the many types of visual impairments that may respond to optical aids. Fifty-eight percent of the potential referring ophthalmologists have not given their patients the opportunity to receive a specialized low vision evaluation.

In turn, special attention should be given to education of the general public concerning "Sight Conservation". One of the major barriers to rehabilitating these people through the application of special lenses has been their instilled fear of suffering further loss of vision from using their eyes. This theory has long been out dated, and the fear of the clients and their families and the general public should be dispelled.

It is further recommended that a more progressive approach be taken in rehabilitating visually impaired children and adults. An objective of this program has been to enable clients to read newsprint and smaller or perform other activities demanded by competitive society. If this can be accomplished and psychological factors permit, we strongly advise leaving children with subnormal vision in regular classes, and reading regular textbooks rather than large print books. We realize, of course, that this is contra-indicated in some instances.

Similar goals should be set for the mature client. He should be encouraged to seek competitive employment rather than work in a sheltered setting, if such is possible. The handicapping effect of the impairment should be minimized.

SUGGESTIONS FOR FURTHER RESEARCH

A number of observations were made by the staff during this three year period which seems to indicate that further research is necessary.

The psychological implications in the fitting of optical aids and the coordinated rehabilitation efforts for the client with subnormal vision seems to merit further attention. These individuals repeatedly made reference to their feeling sure that no one else had a similar condition and that no one could appreciate their related problems.

The clients' marked reaction to various statements made by the staff re-emphasized this fact. For example, comments such as, "I assume that you're having some difficulty recognizing people's faces at a distance", or, "Have you noticed that you sometimes see a thread on your husband's suit jacket but other times miss much more obvious things", seemed to lead them into lengthy discussions of specific problem areas and deeper feelings.

It, therefore, would seem advisable to try group counseling with the partially sighted, enabling them to realize that there are many people with similar problems and affording them the opportunity to discuss problems and possible solutions. The importance of education concerning the outdatedness of the theory of "Sight Conservation" should be re-emphasized.

Other recommendations for research are more technical and medical in nature.

The majority of individuals, receiving services in the Clinic, have a pathological condition which has resulted in the loss of central vision. As previously mentioned, they seem to benefit substantially from the use of magnifying lenses. Frequently, however, the simple application of strong lenses has not been sufficient to enable them to read with ease. Much time was spent in an attempt to teach those clients to fixate eccentrically, thus moving the scotoma out of the desired visual area. The degree and direction of the rotation of the eye varied per individual. The results obtained from this type of specialized adaptive training seemed significant enough to warrant further study.

Amazing increases in reading ease, speed and tolerence were noted after substantial periods of sustained and regular reading with optical aids. The reasons for these often dramatic changes are not easily understood. Research might be under taken to investigate the contrasting responses of patients.

Still another observation has led us to request additional medical research. A number of school aged children with significantly impaired distance vision were observed to read

fine print without correction. They did, however, complain of a brief reading tolerance and of eye strain. Prescribing relatively weak bifocals or reading glasses prevented this child from having to use his full accommodative powers and served to alleviate his complaints of fatigue.

These are just a few specific areas that seem to merit further study. Answers to these questions would facilitate future work with the partially sighted, not only in the fitting and training with optical aids but also in the coordinated efforts for the total rehabilitation of each individual client.

Is it simply due to the difficulty of learning to use a new area of fixation, or are there physiological, neurological and psychological factors involved as well? Until this enigma is found, research must be continued.

APPENDICES

APPENDIX A - INVENTORY OF EQUIPMENT

I. PERMANENT EXAMINING EQUIPMENT

Deluxe Unit with Chair
Floor Unit
Stools
Refractor
Slit Lamp
Muscle Light
Streak Light
Pantoscope
Projector
Screen
Keratometer
Topogometer
Reliance Table
Black Light
Trial Contact Lens Set
Cross Cylinders
Cabinet

Trial Frames
Lensometer
Perimeter
Stand
Chin Rest
Goldmann Three Mirror Lens
Tangent Screen
Test Objects
Indirect Ophthalmoscope
Pocket Light
Flourescent Lamps
Incondescent Lights
Isochromatic Charts
Lebensohn Charts
Amsler Charts
Test Charts
Trial Lens Set

APPENDIX A - INVENTORY OF EQUIPMENT

II. SPECIAL EXAMINING EQUIPMENT

Distance Test Charts for Partially Sighted

Volk Conoid Set

Trial Cataract Lenses

Kollmorgan Telescopic Trial Set

American Optical Trial Set

Illuminated Spectacles

Continental Trial Set

Projector Magnifier

Hearing Aid

Accommodation Rule

Sloan Reading Cards

Keeler "A Series" Word Charts

Industrial Test Charts

Occluders

Adapter Lens for Projector

III. OFFICE EQUIPMENT

Desks

Chairs

Desk Lamps

Wastebaskets

Filing Cabinets

Typewriters

Typing Stand

Tables

Cash Box

ROTARY LOW VISION CLINIC

CURATIVE WORKSHOP OF MILWAUKEE, INC.
750 NORTH 18TH ST. - MILWAUKEE, WIS. 53233
DIVISION 2-2181

NAME OF PATIENT ____________________ Date of Birth __________

ADDRESS ____________________ Date of Examination __________

SHOULD THIS PATIENT BE RE-EXAMINED? __________ When? __________

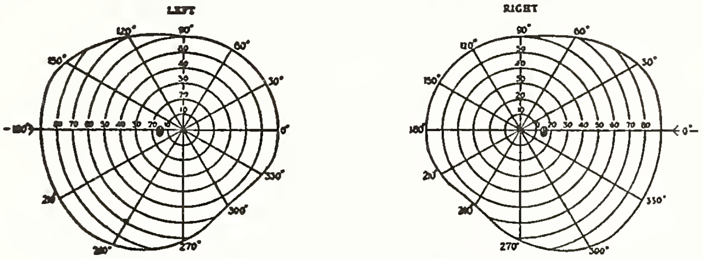
VISUAL ACUITY (rated on basis of Snellen Types)

Without correction { Right Eye__D.________N.________ / Left Eye___D.________N.________

With best correction { Right Eye__D.________N.________ / Left Eye___D.________N.________

(If necessary state vision in terms of light perception, light projection, hand movements, or ability to count fingers.)

VISUAL FIELDS



Please state size of test object. Central scotomata may also be plotted above.

DIAGNOSIS Right Eye ____________________

Left Eye ____________________

ETIOLOGY (if known) ____________________

Probable cause of eye disease (if exact cause is unknown) ____________________

(Statistics of blindness are based on these data—please fill in if at all possible.)

Approximate date of onset of eye disease ____________________

PROGNOSIS Will medical or surgical treatment improve condition? ____________________

What treatment is recommended? ____________________

Any work restrictions? ____________________

(Such as lifting, stretching, pressurized work)

Remarks. ____________________

REFRACTIVE ERROR: O. D. ____________________

O. S. ____________________

Cycloplegic ☐ Non-Cycloplegic ☐

Is an attempt to provide optical aids recommended?

____

____

____________________ M.D.
Signature of Eye Physician

____
Address

Date __________

Date__________, 1966

Name
Address
City, State

RE: (patient's name)

Dear Dr.__________:

We are writing to inform you that we have received your referral, requesting that the above named patient be seen in the Rotary Low Vision Clinic, and to thank you for referring this patient to us.

______________________has been scheduled for an initial visit to the Clinic on ______________________. We will send you a complete report of our findings and recommendations upon completion of our services. If you have any questions prior to receiving this final report, please feel free to contact us.

Your continued interest and support is greatly appreciated.

Sincerely yours,

Madalyn Bock
Administrative Assistant
Rotary Low Vision Clinic

MB/xx

Date____________, 1966

Name
Address
City, State

Dear____________:

This is to inform you that we have received a referral from your eye doctor, requesting that you be evaluated by the Rotary Low Vision Clinic to determine whether or not your vision could be improved by some type of special optical aid.

We have tentatively scheduled you for a preliminary evaluation at ____________ on ______________________________. This will be followed by an examination by ________________ at ____________ on ______________. You then can anticipate one or two additional follow-up examinations before the final optical aid is prescribed. Please let us know as soon as possible if you are unable to keep these scheduled appointments.

If you use eye glasses or magnifying glasses, please be sure to bring them with you. Also, bring any other optical aids you may be using or have on hand at this time.

Sincerely yours,

Madalyn Bock
Administrative Assistant
Rotary Low Vision Clinic

MB/xx

REFERRING AGENCY LETTER

(UPON RECEIPT OF REFERRAL AND AUTHORIZATION)

Date____________, 1966

Name
Address
City, State

RE: (patient's name)

Dear_____________:

We are writing to inform you that we have received your referral on the above named patient requesting that (she or he)be seen in the Rotary Low Vision Clinic, and your authorization of $______for (state services as written in letter) .

On behalf of Dr. Suson and myself, I wish to thank you for referring (patient's name) to our Clinic.

We will be in contact with (him or her) to schedule appointments for our services. Upon termination of our services we will send you a complete report of our findings and recommendations. If, however, you have any questions prior to receiving this report, please don't hesitate to contact us.

Your continued interest and support is greatly appreciated.

Sincerely yours,

Madalyn Bock
Administrative Assistant
Rotary Low Vision Clinic

MB/xx

FOLLOW-UP APPOINTMENT LETTER

Date__________, 1966

Name
Address
City, State

Dear____________:

This is to remind you that we would like to see you again soon in the Rotary Low Vision Clinic for a follow-up evaluation.

We have scheduled you for an appointment with (Doctor Suson or Miss Bock) at (hour, month, day, year). Please let us know before (month, day, year) if you are unable to keep this appointment.

If you use eye glasses or magnifying glasses, please be sure and bring them with you. Also, bring any other optical aids you may be using or have on hand at this time.

Sincerely yours,

Madalyn Bock
Administrative Assistant
Rotary Low Vision Clinic

MB/xx

MONTHLY REPORT ROTARY LOW VISION CLINIC Month__________ 19___

DAYS OF MONTH																						TOTAL
EVALUATION																						
Social Service																						
Diagnostic																						
Home Service																						
TOTAL																						
VISUAL AID																						
Evaluation and Adaptive Training																						
Follow-up																						
TOTALS																						
PATIENT VISITS																						
No. Scheduled daily																						
No. Canceled daily																						
No. Received daily																						

CASELOAD DATA

1. No. enrolled in Dept. first of month__________
2. No. patients enrolled during month__________
3. Total No. enrolled__________
4. Total No. discharged from Dept. during month__________
5. No. to be carried over to next month__________
6. Total number serviced to date__________
7. Age of patients served:

	NEW	TOTAL		NEW	TOTAL
0-10	______	______	41-60	______	______
11-20	______	______	61-80	______	______
21-40	______	______	81-Over	______	______

OPHTHALMOLOGIST

1. Previous No. serviced__________
2. No. sending first referral__________

TOTAL__________

NO. CASES RECEIVING SERVICES FROM OTHER AGENCIES

1. D.V.R.__________
2. Services to the Blind__________
3. Other__________

TOTAL__________

INCOME:

Monthly______fees__________

Rx__________

Total to date fees__________

Rx__________

LOW VISION CLINIC SERVICES

CASE HISTORY RECORD

Case No.________________
Date________________
Ophthalmological form
Received________________
Medical Release________________

PERSONAL DATA

1. Name________________________________
2. Address________________________________
3. Date of Birth______________________________
4. Male________________Female________________
5. Source of Referral__________________________
6. Education: None________Elementary____________Yrs.

   ____
7. Occupation Prior to Visual Loss__________________

   __________After Loss________________________
8. Soure of Income or Support______________________

   ____
9. Patient's Attitude Toward Service__________________

   ____

   ____
10. Reaction to use of Optical Aids__________________

    ____

EVALUATION OF USE OF VISION

11. Does Patient Employ Any Aid Now?____________________

What____________________How Long____________________

For What Activities____________________

____

12. Which Eye Does Patient Feel Is Best For Distance?
O.D.____________________O.S.____________________

13. Use Sun Glasses? Outdoors____________Never____________

Occasionally____________Habitually____________

14. Is Color Vision Good?____________________

Poor For______________________________

15. Bright Light: Best Vision____________Worse____________

Dim Light: Best Vision____________Worse____________

16. Does Patient See Proportionately as well at night as in daytime?____________________

17. Can Patient Recognize People's Faces?____________

What Distance____________________

Street Signs____________________

House Numbers____________________

Bus Numbers and Signs____________________

Traffic Lights: Day____________Night____________

18. Can Patient Read Now?________Could he at sometime________

____

19. Can Patient Now Read: Headlines____________________

Subheads________________Newsprint________________

Small Newsprint____________Typing________________

Magazines________________None________________

20. Can Patient Read By Using: Bifocals____________________

Reading glasses__________Unaided____________________

What Kind____

21. Is Patient Able To Use Telephone Directory Without Magnification?_____________With Magnification?____________

22. Attend Movies?____

23. Watch T. V.____________What Distance____________Ft.

24. Patient's evaluation of visual tolerence______________

____

25. Does Patient Travel Outdoors Alone in Familiar location?_

______________________Unfamiliar Location____________

Use Cane?_______________Use Guide Dog_______________

Other?____

26. Does Patient Prefer Distance or Near Assistance Most?____

27. For What Purposes Does Patient Want Aid?________________

____

28. Does Patient Play Musical Instrument?__________________

What____________________Play by Memory?______________

Ear?____________________Reading______________________

29. Chief Reader: Self______Spouse_________________________

Children________________Parents______________________

Relatives____

HISTORY OF BLINDNESS

30. Ocular Diagnosis ______________________________

____

____

31. Date of Last Refraction _________________________

32. Present Rx __________ How Old __________________

Is It Worn ___________________________________

33. Is Rx For: Distance _____ Near ______ Bifocals _______

34. Has Patient Ever Been Examined For Use Of Any Optical

Aid? _______________ Telescopic? _______________

Microscopic? _________ Other? ____________________

35. Present Visual Acuity: With Rx ____________________

Without Rx ___________________________________

36. Date Of Onset Of Blindness _______________________

Duration of Process of Blindness ___________________

37. Duration of Blindness ___________________________

38. Name of Last Practitioner _________________________

39. Under Treatment? _______ Eye ______ General __________

40. Does Patient Experience Any Ocular Pain? ____________

How Long Since Last Bothered? ______________________

PERSONAL EVALUATION

41. Patient's living situation: ______________________________

42. Marital Status: ______________________________

43. Current Activities: ______________________________

44. Patient's Attitudes Regarding His Blindness: ______________

45. Patient's Response to Agency Services? ______________

46. Patient's General Health: ______________________________

Motivation ______________

Sociability ______________

Bill ______________

Amount ______________

For Services: ______________

For Glasses: ______________

ATTITUDE TOWARD OPTICAL AIDS CLINIC

1. Hostile toward Clinic; refuses to take part; indicates that he would not attend Clinic except that he has been forced to do so.
2. Attitude of pessimism toward Clinic; will cooperate but believes there is little liklihood that the Clinic will be able to do anything for him.
3. Attitude of indifference. Accepts explanations passively but without much feeling one way or the other.
4. Optimistic attitude. The patient believes that he will benefit from use of the aid and accepts the services of the Clinic with positive feelings.
5. The client is eager and expresses exceptionally strong feelings.

SOCIABILITY RATING PROCEDURES

Personality

1. Very seclusive, quiet, speaks olny when spoken to; responses to questions are brief, monosyllabic--or patient is clearly depressed.
2. Somewhat seclusive, tends to be rather introspective and quiet--or shows some depressive tendencies.
3. Nothing unusual about affect. Client is neither particularly outgoing nor seclusive.
4. Rather outgoing and cheerful. Client speaks fully but needs some prodding.
5. Very outgoing, effervescent, cheerful, spontaneous in interviews. Freely volunteers information about himself.

Friendship

1. Has very few friends and admits extreme difficulty in forming new friendships.
2. Restricts social contacts to members of the family or has only a few friends with who he habitually interacts.
3. Nothing unusual about the number of social contacts. Client has some contacts outside the home.
4. Notably active socially. Client interacts with several friends outside the home and forms new friendships with little difficulty.
5. Has a very large number of friends. Client's orientation is extremely outgoing and he interacts with others for enjoyment. He forms new relationships rapidly and seeks them out.

Activities

1. Activities are almost totally home-centered. Client's contact with the outside world is through radio and television.
2. Activities are principally home-centered. Although client may take part in social activities, they are seldom self-initiated and are usually prolongations of long existing patterns.
3. The number and type of social contacts are remarkable. Client is fairly active outside the home.
4. Client is quite active socially, with several well formed interests or activities most of which involve other human beings.
5. Client is very definitely overactive socially, spending the majority of his time outside the home in people-oriented activities.

Weigh the foregoing in arriving at the following summary rating:

5 very sociable

4 sociable

3 neither sociable nor unsociable

2 unsociable

1 very unsociable

No.__________ Date________________

ATDP SCALES

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark everyone. Write +1, +2, +3, or -1, -2, -3: depending on how you feel in each case.

+3:	I AGREE VERY MUCH	-1:	I DISAGREE A LITTLE
+2:	I AGREE PRETTY MUCH	-2:	I DISAGREE PRETTY MUCH
+1:	I AGREE A LITTLE	-3:	I DISAGREE VERY MUCH

__ 1. Parents of disabled children should be less strict than other parents.
__ 2. Physically disabled persons are just as intelligent as non-disabled ones.
__ 3. Disabled people are usually easier to get along with than other people.
__ 4. Most disabled people feel sorry for themselves.
__ 5. Disabled people are the same as anyone else.
__ 6. There shouldn't be special schools for disabled children.
__ 7. It would be best for disabled persons to live and work in special communities.
__ 8. It is up to the government to take care of disabled persons.
__ 9. Most disabled people worry a great deal.
__10. Disabled people should not be expected to meet the same standards as non-disabled people.
__11. Disabled people are as happy as non-disabled ones.
__12. Severely disabled people are no harder to get along with than those with minor disabilities.
__13. It is almost impossible for a disabled person to lead a normal life.
__14. You should not expect too much from disabled people.
__15. Disabled people are more easily upset than non - disabled people.
__16. Disabled people tend to keep to themselves much of the time.
__17. Disabled people cannot have a normal social life.
__18. Most disabled people feel that they are not as good as other people.
__19. You have to be careful of what you say when you are with disabled people.
__20. Disabled people are often grouchy.

ROTARY LOW VISION CLINIC FEE ADJUSTMENT SCALE

Adopted from

The Cleveland Society for the Blind

December 1, 1963

TOTAL NUMBER OF PERSONS IN FAMILY	GROSS INCOME	% OF FEE	ACTUAL FEE
1	Under $100	---	$ 1.00
	$100- 149	10%	3.50
	150- 199	20%	7.00
	200- 249	35%	12.35
	250- 299	50%	17.50
	300- 349	70%	24.50
	350- over	100%	35.00
2	Under $200	---	$ 1.00
	$201- 249	10%	3.50
	250- 299	20%	7.00
	300- 349	30%	10.50
	350- 399	50%	17.50
	400- 449	70%	24.50
	450- over	100%	35.00
3	Under $250	---	$ 1.00
	$251- 299	10%	3.50
	300- 349	20%	7.00
	350- 399	30%	12.25
	400- 449	50%	17.50
	450- 499	70%	26.25
	500- over	100%	35.00
4	Under $300	---	$ 1.00
	$300- 349	20%	7.00
	350- 399	30%	10.50
	400- 449	40%	14.00
	450- 499	60%	21.00
	500- 549	80%	28.00
	550- Over	100%	35.00
5	Under $300	---	$ 1.00
	$300- 349	15%	5.25
	350- 399	20%	7.00
	400- 449	30%	10.50
	450- 499	50%	17.50
	500- 549	70%	24.50
	550- 599	90%	31.50
	600- over	100%	35.00

ROTARY LOW VISION CLINIC

Fee Schedule - December 1, 1965

1. Full Fee For Twelve Months Service
2. Re-admit After Twelve Months

PERSONS IN FAMILY	GROSS INCOME	% OF FEE	ACTUAL FEE
1	Under $100	---	$5.00
	$100- 149	10%	$ 7.50
	150- 199	20%	15.00
	200- 249	33%	25.00
	250- 299	40%	33.75
	300- 349	66%	50.00
	350- 399	100%	75.00
2	Under $200	---	$5.00
	$201- 249	10%	$ 7.50
	250- 299	20%	15.00
	300- 349	33%	25.00
	350- 399	40%	33.75
	400- 449	66%	50.00
	450- over	100%	75.00
3	Under $250	---	$5.00
	$250- 299	10%	$ 7.50
	300- 349	20%	15.00
	350- 399	33%	25.00
	400- 449	40%	33.75
	450- 499	66%	50.00
	500- over	100%	75.00
4	Under $300	---	$5.00
	$301- 349	10%	$ 7.50
	350- 399	20%	15.00
	400- 449	33%	25.00
	450- 499	40%	33.75
	500- 549	66%	50.00
	550- over	100%	75.00
5	Under $300	---	$2.00
	$300- 349	10%	$ 7.50
	350- 399	20%	15.00
	400- 449	33%	25.00
	450- 499	40%	33.75
	500- 549	66%	50.00
	550- over	75%	75.00

ROTARY LOW VISION CLINIC

Fee Schedule - December 1, 1966

1. Full Fee For Twelve Months Service
2. Re-admit After Twelve Months

PERSONS IN FAMILY	GROSS INCOME	% OF FEE	ACTUAL FEE
1	Under $100	---	$5.00 or less
	$100- 149	10%	$10.00
	150- 199	20%	20.00
	200- 249	33%	35.00
	250- 299	40%	40.00
	300- 349	60%	65.00
	350- 399	75%	75.00
	400- over	100%	100.00
2	Under $200	---	$5.00 or less
	$201- 249	10%	$10.00
	250- 299	20%	20.00
	300- 349	33%	35.00
	350- 399	40%	40.00
	400- 449	60%	65.00
	450- 499	75%	75.00
	500- over	100%	100.00
3	Under $250	---	$5.00 or less
	$250- 299	10%	$10.00
	300- 349	20%	20.00
	350- 399	35%	35.00
	400- 449	40%	40.00
	450- 499	65%	65.00
	500- 599	75%	75.00
	600- over	100%	100.00
4	Under $300	---	$5.00 or less
	$301- 349	10%	$10.00
	350- 399	20%	20.00
	400- 449	35%	35.00
	450- 499	40%	40.00
	500- 549	60%	65.00
	550- 599	75%	75.00
	600- over	100%	100.00
5	Under $300	---	$2.00 or less

ROTARY LOW VISION CLINIC

Fee Schedule - December 1, 1966

(continued)

PERSONS IN FAMILY	GROSS INCOME	% OF FEE	ACTUAL FEE
5	$300- 349	10%	$10.00
	350- 399	20%	20.00
	400- 449	35%	35.00
	450- 499	40%	40.00
	500- 549	65%	65.00
	550- 599	75%	75.00
	600- over	100%	100.00

INSTRUCTIONS - FOR USE WITH MICROSCOPIC SPECTACLES

A microscopic spectacle has been dispensed to you. Please remember the following:

1.) Keep both eyes open at all times.

2.) If a unit has been prescribed for only one eye, you may have to patch the other eye until you get used to using the unit.

3.) In order to see print clearly, you must hold the material very close__________.

4.) In the beginning it will be difficult to read but it will become easier as you go along.

5.) Your arms may tire before your eyes do - hold arms close to body. Get a stand to hold material, if necessary.

6.) Start with short periods first, that is, 10 - 15 minute periods and gradually work longer.

7.) When reading newspaper, hold it flat. A stiff cardboard will help you keep it flat.

8.) Clean only with a soft tissue as lenses will scratch easily. DO NOT USE WATER TO CLEAN.

9.) Try to use the same type lighting that we used at the Clinic.

10.) You may find it easier to move the book or reading material rather than your head.

11.) To find reading distance, start with material at nose and move away slowly.

Three most common errors are:

1.) Material not held at focal point
2.) Material not held flat
3.) Patient turns head

Rotary Low Vision Clinic
750 North 18th Street
Milwaukee, Wisconsin 53233

INSTRUCTIONS FOR USE WITH BIFOCAL SPECTACLES

A bifocal spectacle has been dispensed to you. Please remember the following:

1.) Keep both eyes open at all times.

2.) Do not try to walk about looking through the bifocal (lower section).

3.) Distant objects will appear to be closer than they actually are when looking through bifocals.

4.) The bifocal itself is to be used for near objects, the upper portion is for distant objects.

5.) When attempting to climb stairs, drop your head and look over the bifocals; this will enable you to see the stairs clearly and they will also appear at the proper distance.

6.) Clean only with a soft tissue as the bifocal lens itself is softer than regular glass and scratches more easily.

7.) Remember when reading to keep the head fairly straight and drop the eyes, then drop your head to a comfortable position.

Rotary Low Vision Clinic
750 North 18th Street
Milwaukee, Wisconsin 53233

INSTRUCTIONS - FOR USE WITH TELESCOPIC SPECTACLES

A Telescopic Spectacle has been dispensed to you. Please remember the following:

1.) Keep both eyes open at all times.

2.) Do not try to walk looking through the telescopic section.

3.) Objects will appear to be about one half the distance they actually are.

4.) Your field of view will be cut down to a great extent when looking through the telescope.

5.) Clean only with a soft tissue. DO NOT CLEAN WITH WATER.

If you have a reading cap:

1.) Remember that you must read at a fairly close distance.

2.) If you are reading with only one eye, keep the other eye open. You may have to patch the eye not being used at first.

3.) Start with short periods, that is 10 - 15 minutes of reading and gradually increase your reading time.

4.) In the beginning you may find it difficult to read, but it will become easier as you go along.

5.) Your arms may get tired before your eyes do. Hold arms close to body. Get a stand to hold material, if necessary.

6.) Try to use the same type lighting that we used in the Clinic.

7.) You may find it easier to move the book or reading material than your head.

Rotary Low Vision Clinic
750 North 18th Street
Milwaukee, Wisconsin 53233

Date________, 1966

John Brown, M.D.
Address
City, State

SUMMARY REPORT

RE: Mr. G

This 55-year-old divorced white male was initially seen in the Rotary Low Vision Clinic on (date) for a specialized low vision evaluation.

Mr. G informed us that hernia and prostate surgery was pending but that he was otherwise in good general health.

To the best of his recollection, his vision has been impaired since early childhood and had remained stable over the years.

He related that he had had only six years of formal education. Until May of 1966 he had been employed as a helper on a coal truck, a job in which his impairment was not handicapping. A change in management resulted in his losing his job.

Thus, Mr. G was interested in utilizing any optical aid that might render him more employable. His general attitude toward his limitations seemed favorable although he indicated that he would feel somewhat self conscious about using optical aids in public.

The results of our complete evaluation and our recommendations are as follows:

I. Visual Acuity without correction:
O.D. 20/600
O.S. 20/700

II. External Examination: Normal.

III. Extraocular Movements and Muscle Balance: Mr. G appears exophoric at near. All else seems essentially normal.

IV. Biomicroscopy: Occasional punctate opacities are observed in the anterior and posterior corticles of both lenses.

V. Gonioscopy: The angles of both eyes are wide open.

VI. Funduscopy: The media of both eyes are clear. The optic discs are slightly to moderately pale, especially temporally. The rest of the fundi appears normal.

VII. Retinoscopy:
O.U. +.25 sphere

VIII. Manifest Refraction for Near:
O.D. +25.00 Volk Conoid = J 1 with some difficulty
O.S. +30.00 Volk Conoid = J 2 with some difficulty

IX. Demonstration of and Adaptive Training with Optical Aids: Mr. G appears to prefer his right eye. A 29.00 diopter plastic aspheric lens enabled Mr. G to read newsprint with fair ease. He was given the opportunity to take the lens of comparable strength home on a trial basis.

A fourteen power hand magnifier was greatly to his liking and enabled him to read J 1. This folding pocket magnifier was also taken home on a trial basis.

Various telescopic lenses were tried for the improvement of his disrance vision for watching television, seeing bus numbers, street signs, etc. Six power binoculars improved his vision to 20/60+. An eight power monocular improved his vision to 20/40. Both of these lenses were taken home on trial.

X. Optical Aids Prescribed:
A. Reading glasses:
O.U. +29.00 plastic aspheric lens with clip-on occluder.

B. Fourteen power aspheric lens in a folding pocket magnifier.

C. An eight power telescopic monocular.

These aids were purchased for Mr. G by the Vocational Rehabilitation Division of the Services to the Blind as these devices would seem to render him more employable.

XI. Re-evaluation and Summary: Mr. G was re-evaluated in the Rotary Low Vision Clinic on (date) of this year. At that time he indicated that he was very pleased with his ability to perform with the prescribed aids and stated that they have enabled him to find remunerative employment.

The magnifying lenses have allowed him to read the fine print on the scales at work while the telescopic device has proven to be helpful for general mobility, (seeing bus numbers, etc.) and recreation.

As no further services appeared indicated, we are discharging him form the Clinic. He was, however, encouraged to return to the Clinic at anytime in the future if he feels we may be of any further service to him.

Thank you again for this referral.

Sincerely yours,

Elieser B. Suson, M.D.
Clinic Director, and
Clinic Ophthalmologist

cc: xxxx

FOLLOW-UP LETTER

Date______________, 1966

Name
Address
City, State

Dear_____________:

It has been (time or date) since you received your (kind of aid) and we are wondering what success you are having with (it or them). Therefore, we have devised a questionaire to gather information that will be of great help to us to better serve you and others who may continue to come to the Rotary Low Vision Clinic.

Enclosed, please find a second copy of the forms you completed when you were initially seen in our clinic. We hope that you will find time to read the questions, and after giving them some thought, fill in your answers and return the forms to us in the enclosed, self addressed, stamped envelope. If you have any comments, or additional information that you would like to add which is not included on the forms, please write it on the back of the questionaire.

We certainly will appreciate your cooperation and hope that we will hear from you soon. Your response to these forms is most important and will help us considerably in evaluating how well we are doing in our work.

May we ask that you notify us if you have a change of address so that we may maintain contact with you.

Sincerely yours,

Madalyn Bock
Administrative Assistant
Rotary Low Vision Clinic

MB/xx
Enclosures

FOLLOW-UP FORM

NAME ____________________ CASE NO. ______________

1. OCCUPATION ____________ IS IT THE SAME? __________ OR CHANGED? ______ SINCE YOU RECEIVED YOUR OPTICAL AID. IF CHANGED, WHAT KIND OF WORK ARE YOU DOING NOW? __________

2. HOW OFTEN DO YOU USE YOUR AID? ______________

3. FOR WHAT PURPOSE OR PURPOSES DO YOU USE YOUR AID? ________

4. WORK? __________ LEISURE TIME? ______________

5. DID YOUR AID GIVE YOU ANY DIFFICULTY? ____________ WHAT KIND? ____________________

6. RATE OF SUCCESS OF YOUR AID. (CHECK ONE OF THE FOLLOWING)
   __________ (A) NOT USED AT ALL
   __________ (B) LIMITED USE
   __________ (C) USED ROUTINELY

7. HAS YOUR AID BEEN AS USEFUL TO YOU AS EXPECTED? MORE USEFUL ____ LESS USEFUL ______ WOULD YOU EXPLAIN ________
   ____

8. CAN YOU READ HEADLINES? ___ NEWSPRINT? ___ HOUSE NUMBERS _____

9. HAS YOUR AID HELPED YOU TO DO ANY OF THE FOLLOWING? READING ___ WRITING ___ T.V. ___ HOBBIES ___ SEWING __________ KNITTING ___ PLAY CARDS ___ OTHER ______________

10. DO YOU TAKE PART IN OUTSIDE ACTIVITIES? __________ CHURCH ORGANIZATIONS ___ CLUBS ___ MOVIES __________ OTHER ______________________

11. ARE YOU MORE ACTIVE SOCIALLY NOW THAN BEFORE YOU RECEIVED YOUR AID? PLEASE EXPLAIN ______________

12. WOULD YOU LIKE US TO KEEP YOU POSTED ON WHAT IS HAPPENING IN THE FIELD OF SERVICES TO PEOPLE WITH LOW VISION? ______

ROTARY LOW VISION CLINIC
750 North 18th Street - Milwaukee, Wis.
TELEPHONE 342-1460

DATE____________________

John Brown, M.D.
Address
City, State

Dear Dr. Brown:

The Rotary Low Vision Clinic has been servicing patients for approximately (length of time). During this time, you and (actual number) other ophthalmologists have referred a total of (number) persons to us for a specialized "low vision evaluation".

The Medical Advisory Board of the Clinic is asking you to express your opinion of this program and to evaluate the services it renders. This will help in determining the worth in continuing this Clinic and improving existing procedures. Your time and cooperation will be greatly appreciated.

Please complete this form and return the same to us at your earliest convenience.

Thank you again for your interest and help.

Sincerely yours,

Madalyn Bock
Administrative Assistant

I. The Rotary Low Vision Clinic and its services are:
___necessary ___helpful ___of little value to me.

II. I am ___ pleased with the services my patients have
____satisfied ____dissatisfied.

III. I plan to continue referring patients to the Clinic
yes____ no____

IV. Remarks and recommendations:______________________________
____
____
____

APPENDIX C

TABLES AND STATISTICAL FINDINGS CONCERNING THE RELATIONSHIP BETWEEN CLIENT SUCCESS WITH OPTICAL AIDS AND A NUMBER OF VARIABLES.

Introduction

A discussion of the material presented in Appendix C is found in Sections IV and V. This introductory section is designed to make the reading of these tables more meaningful by briefly explaining the statistical procedure used and defining various terms shown in the tables.

"Success" is the extent to which the client used the optical aid prescribed by the Clinic Ophthalmologist. The degree of success was rated by the client as follows:

1.) Not used at all - 0; 2.) Limited use - 100; or 3.) Used routinely - 200. These ratings were obtained from follow-up questionaires, completed by 152 people. The scores shown on the most recent forms, submitted by the clients, were used.

The relationship of success to each of the following variables is shown in the first six tables: 1.) age at the time of admittance to the program; 2.) level of education; 3.) age at onset of visual impairment; 4.) duration of visual impairment; 5.) motivation; and 6.) sociability. The degree of motivation and sociability were determined by the administrative assistant during the initial interview.

"Motivation" to accept the services of the Rotary Low Vision Clinic and the use of optical aids was rated according to a scale from one to five, the highest number denoting the strongest level of motivation.

"Sociability" was rated in the same manner. A score of five signified extreme sociability. The scales used to measure the level of motivation and sociability are found in Appendix B.. 12 - 13)

Table VII shows the relationship between clients' success with optical aids and scores clients obtained on the "Attitude Toward Disabled Persons" scale. Scores obtained on this scale range from zero to 120, zero denoting the least favorable attitude toward disabled persons.

The relationship of success to the following variables are shown in Table VIII through XIV, respectively: 1.) sex distribution; 2.) current employment status; 3.) principle purpose for obtaining an optical aid; 4.) clients receiving

services from the Vocational Rehabilitation Division of the State Board of Vocational, Technical, and Adult Education; 5.) clients receiving services from the Services to the Blind of the Division of Public Assistance; 6.) types of optical aids received; and 7.) causes of visual impairment.

Vertical columns represent the success factor, and rows, as read from left to right, the other variables. Proportions are designated as percentages.

Mean scores of success ratings are shown for each category within each variable, and rank order correlation coefficients are given when appropriate.

The Chi-square value is noted along with the critical Chi-square value required for significance at the five percent level. A statement of the results indicates if the obtained chi-square value shows a significant relationship between the two variables at the .05 level.

Table I

RELATIONSHIP BETWEEN AGE AND SUCCESS

Age	Means of success ratings
Birth to thirteenth birthday	114
Thirteenth to nineteenth birthday	160
Nineteenth to twenty-fifth birthday	150
Twenty-fifth to fortieth birthday	158
Fortieth to fifty-fifth birthday	157
Fifty-fifth to sixty-fifth birthday	136
Sixty-fifth to seventy-fifth birthday	120
Seventy-five and older	164
Grand mean	144
Correlation coefficient	-.003

Table II

RELATIONSHIP BETWEEN EDUCATION AND SUCCESS

Educational level	Mean of success rating
Less than completion of elementary	150
Completion of elementary	134
Attendance at but not completion of high school	125
High school graduate	154
Attendance at but not completion of college	163
College graduate	135
Grand mean	144
Correlation coefficient	.019

Table III

RELATIONSHIP BETWEEN CLIENT AGE AT ONSET OF VISUAL IMPAIRMENT AND SUCCESS

Age of onset	Mean of success rating
Birth to sixth birthday	143
Sixth to thirteenth birthday	133
Thirteenth to nineteenth birthday	120
Nineteenth to twenty-fifth birthday	126
Twenty-fifth to fortieth birthday	155
Fortieth to fifty-fifth birthday	166
Fifty-fifth to sixty-fifth birthday	133
Sixty-fifth to seventy-fifth birthday	131
Past seventy-fifth birthday	144
Grand mean	144
Correlation coefficient	-.014

Table IV

RELATIONSHIP BETWEEN DURATION OF VISUAL IMPAIRMENT AND SUCCESS

Duration	Mean of success rating
Less than one year	131
One, but less than three years	136
Three, but less than five years	153
Five, but less than ten years	132
Ten, but less than twenty years	171
Twenty, but less than thirty years	129
Thirty or more years	145
Grand mean	144
Correlation coefficient	.098

Table V

RELATIONSHIP BETWEEN PRIOR MOTIVATION AND SUCCESS

Prior motivation rating	Mean of success rating
1	150
2	129
3	140
4	146
5	143
Grand mean	144
Correlation coefficient	.054

*The Motivation Rating Scale is from one to five. The higher number indicating stronger motivation.

Table VI

RELATIONSHIP BETWEEN SOCIABILITY AND SUCCESS

Sociability rating*	Mean of success rating
1	114
2	147
3	135
4	148
5	200
Grand mean	144
Correlation coefficient	.096

*The Sociability Rating is from one to five. The higher number indicates more sociability.

Table VII

RELATIONSHIP BETWEEN "ATTITUDES TOWARD DISABLED PERSONS" SCALE AND SUCCESS

Success	Mean score on ATDP scale*
Aid not used	55.6
Limited use	79.5
Routine use	72.0
Correlation coefficient	.080

*See Section V for discussion of ATDP scale.

Table VIII

RELATIONSHIP BETWEEN
SEX OF CLIENTS AND SUCCESS

Sex	Aid not used	Limited use	Routine use
Male	5.2%	17.1%	23.6%
Female	7.2%	16.4%	30.2%

Chi Square - .770

Critical value for significance at .05 level - 3.84

Results - Not significant at .05 level.

Table IX

RELATIONSHIP BETWEEN EMPLOYMENT STATUS AND SUCCESS

Employment status	Aid not used	Limited use	Routine use
Not currently seeking employment	10.0%	24.6%	38.0%
Unemployed, but seekimg employment	.6%	2.0%	2.0%
Part-time employment	.6%	3.3%	3.3%
Full-time employment, dissatisfied	0.0%	.6%	0.0%
Full-time employment, satisfied	1.3%	3.3%	10.1%

Chi-square - 5.00

Critical value for significance at .05 level - 15.51

Results - Not significant at .05 level

Table X

RELATIONSHIP BETWEEN PRINCIPAL PURPOSE FOR WHICH CLIENT SOUGHT AID AND SUCCESS

Purpose	Aid not used	Limited use	Routine use
Reading related to employment	0.0%	3.9%	6.0%
Other duties related to employment	0.0%	0.0%	3.9%
Reading for personal interest	7.9%	19.2%	31.1%
Other activities of daily living (Sewing, housework, etc.)	1.9%	5.2%	4.6%
Hobbies	0.0%	0.0%	.6%
Mobility and independent travel	1.9%	0.0%	1.9%
Schoolwork	.6%	4.6%	5.2%
Not specified	0.0%	0.0%	.6%

Chi-square - 19.52

Critical value for significance at .05 level - 23.68

Results - Not significant at .05 level.

Table XI

RELATIVE SUCCESS OF CLIENTS ALSO RECEIVING SERVICES FROM THE VOCATIONAL REHABILITATION DIVISION OF THE STATE BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION

Present status	Aid not used	Limited use	Routine use
Receiving services	.6%	7.4%	5.4%
Not receiving services	11.5%	27.2%	47.6%

Chi-square - 4.49

Critical value for significance at .05 level - 5.99

Results - Not significant at .05 level.

Table XII

RELATIVE SUCCESS OF CLIENTS RECEIVING SERVICES FROM THE DIVISION OF SERVICES TO THE BLIND

Present status	Aid not used	Limited use	Routine use
Receiving services	1.3%	4.8%	9.9%
Not receiving services	10.8%	29.6%	43.3%

Chi-square - 2.91

Critical values for significance at .05 level - 5.99

Results - Not significant at .05 level.

Table XIII

RELATIONSHIP BETWEEN SUCCESS AND AND TYPE OF OPTICAL AID GIVEN*

Optical aid	Aid not used	Limited use	Routine use
Conventional lenses	.6%	0.0%	3.6%
Hand magnifier	0.6%	6.2%	8.9%
Stand magnifier	0.0%	2.7%	5.5%
Reading glasses of two and one half power or less	3.4%	5.9%	9.6%
Bifocals	3.4%	5.5%	11.0%
Reading glasses of more than two and one half power	2.0%	3.4%	13.1%
Telescopic lenses	.6%	6.8%	6.2%
Other lenses	0.0%	.6%	0.0%

Chi-square - 17.48

Critical value for significance at .05 level - 26.30

Results - Not significant at .05 level

*The optical aid considered to be of most importance to the client and indicated as such by him on the follow-up form was the one used for this chart.

Table XIV

RELATIONSHIP BETWEEN CAUSE OF VISUAL IMPAIRMENT AND SUCCESS

Cause	Aid not used	Limited use	Routine use
Senile macular degeneration	4.2%	11.7%	16.5%
Juvenile macular degeneration	.6%	1.2%	3.5%
Myopia	2.4%	4.2%	7.5%
Uveitis and Chorioretinitis	1.2%	1.2%	3.6%
Glaucoma	.6%	1.2%	3.0%
Diabetic retinopathy	.6%	1.2%	3.0%
Retinal detachment	.6%	1.8%	2.4%
Retinitis pigmentosa	1.2%	.6%	3.5%
Congenital cataracts	0.0%	1.8%	2.4%
Hypertensive-Artereo sclerotic retinopathy	.0%	1.2%	2.4%
Primary optic atrophy	.0%	1.2%	2.4%
Corneal dystrophy	.0%	1.2%	1.2%
Amblyopia	.0%	1.2%	.6%
Chorioretinal Degeneration, unclassified	.6%	.6%	1.2%
Albinism	.0%	.0%	1.2%
Other causes	.6%	3.5%	1.2%

Chi-square - 25.91

Criteria value for significane at .05 level - 43.77

Result - Not significant at .05 level.
(C-11)

APPENDIX D - SUGGESTED READING LIST

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